



Volunteers at a high-rise condo host drills and other events to raise awareness among residents of disaster preparedness.

## Japan: Tremors of change

Painful experience with deadly earthquakes has spurred the Japanese to strengthen their system of community-based disaster response.

By Makiko Haraga

**W**hen a major earthquake hit Kobe, Japan, in January 1995, civilians took the initiative in combatting fires that broke out simultaneously at many locations in the earthquake's aftermath, fires so numerous that they would have been impossible for professional firefighters to handle.

Watching the scenes of cooperative rescue efforts among Kobe's residents, the Japanese people relearned an old lesson: Solidarity among neighbors is the key in disaster preparedness.

"The most important lesson we learned from Kobe is that we need to have good relationships with each other within a neighborhood," says Masaki Urano, a sociology professor at Waseda University in Tokyo and an expert on community-based crisis management.

"People's knowledge about their neighbors enabled their rescue efforts. It was helpful that they knew families who have

those who need help, like children, the elderly and disabled persons. They knew who might have been trapped inside," he says, adding that about 80% of the rescue efforts were made by civilians, not professionals. More than 6,400 people were killed by the quake.

### A vulnerable nation

The disaster in Kobe also reminded the Japanese people that their country is exposed to all kinds of natural disasters. Japan is in a particularly vulnerable part of the world.

According to a government report, 21% of earthquakes worldwide between 1994 and 1998 that were larger than magnitude 6 were in Japan. The country's central region, including Tokyo, is especially at risk. The record shows that a massive earthquake hits the area every 100 to 150 years, and experts say the next one is likely to occur within 50 years. In addition, Japan has more than 10% of Earth's active volcanoes.

The lessons of Kobe also brought some new challenges.

Courtesy Nagisa Neighborhood Volunteer Group

Community leaders realized that they needed to revise their schemes for disaster preparedness. Before 1995, the heart of their activities had been drills for evacuation and firefighting, but after the Kobe earthquake, urban search and rescue and shelter management became key issues.

They also realized that more should be done to make their programs practical. "Standardized drills, which they have practiced for so long, are no longer effective in a real situation," says Urano. He points out that community leaders should simulate a wide range of problems, including post-disaster situations, and seek solutions for such new challenges.

Local communities across Japan have been seeking their own ways to protect themselves better in case of a disaster. Fortunately, there are two types of groups already active in this area: Volunteer Fire Corps and Neighborhood Volunteer Groups.

### VFC membership

Japan's version of Community Emergency Response Teams, Volunteer Fire Corps are part of their local fire departments and funded by tax revenues. Their members are civilians who have other jobs and get official training in firefighting, first aid and rescue (including breaching walls to get into collapsed houses and rescue those who are trapped).

VFCs originated back in 1720, when the shogun Yoshimune Tokugawa first established civilian firefighting groups in Tokyo; the majority of the members at that time were steeplejacks. This neighborhood firefighting evolved into today's VFCs.

Despite the increased awareness of disaster preparedness, the stagnant economy is hindering efforts to strengthen VFCs. Recruiting is getting more difficult, especially in urban areas, says Capt. Kojiro Kunitomo of the Tokyo Fire Department, who oversees VFCs. "We are challenged by recession and the aging of society," he explains.

Any healthy individual can join a VFC if he or she is employed by a local company or lives in the area, though most municipalities also require Japanese citizenship. The rationale is that VFC members have authority to enter collapsed houses and to make residents work for them.

According to a government survey, there are more than 3,600 VFCs across the nation, with about 940,000 people enrolled. In the last 12 years, the number of female members has increased by 560%.

Since there is no national agency dedicated to disaster preparedness, each municipality allocates funds and oversees VFC operations within its jurisdiction. VFC members receive compensation and insurance coverage for their firefighting activities, including drills. Although the pay is minimal, each VFC member is expected to serve at least 20 occasions per year, which includes both training and any actual firefighting. About \$20 is paid for each occasion, in addition to the annual compensation.

Most members, especially in large cities, find this level of commitment quite demanding. Kunitomo notes that more than 60% of VFC members in Tokyo are self-employed, which means they can be more flexible than salaried men.

Each VFC has its own storage site for equipment, including a water pump, tools for removing rubble and debris,



A Volunteer Fire Corps team demonstrates their skills at a local school in one of Tokyo's residential neighborhoods.

sandbags, a rice cooker and sometimes even an inflatable boat.

### VFC training and operations

VFCs receive training from their local fire department, but they also conduct routine training and exercises themselves. In fact, some VFC members are very knowledgeable, having served for 20 or 30 years.

When there is a fire, typically the local fire department calls the head of the VFC that covers the area where the fire is occurring and the VFC head calls the rest of the team. Since all team members have their own "real" jobs, however, they are not requested (or expected) to participate every time.

"We will have to depend on VFCs when fires spread here and there after a great earthquake like what happened in Kobe," says Lt. Isao Okabe of Koishikawa fire station in Tokyo. "And we know that people will be more willing to help



Volunteer Fire Corps members are drilled in how to rescue those who are trapped inside a collapsed house.

VFC members rather than firefighters, because they know each other very well. That's the beauty of neighborhood fire-fighting."

The Koishikawa station has six VFCs totaling 174 members. In Tokyo, each VFC typically covers an area of 1 square kilometer, or about a third of a square mile. Because Tokyo is so densely populated, this includes more houses than an American might imagine.

**"The most important lesson we learned from Kobe is that we need to have good relationships with each other within a neighborhood."** — Prof. Masaki Urano, Waseda University, Tokyo

Koishikawa is a residential neighborhood near downtown Tokyo, a hilly town with lots of narrow streets where a fire engine can't enter. And 5% of the approximately 48,000 households still live in old wooden houses, which are considered a great fire hazard in case of an earthquake.

To beef up disaster preparedness among people in town, VFCs in Koishikawa have been conducting "30-minute drills" on weekends. Typically, they pick a narrow street where houses and apartment buildings are built close to each other and conduct a firefighting drill without any advance notice to residents.

"This way, we can get more people involved, because they are curious to know what's going on in front of their houses. They actually come out to join our drill and learn how to use a fire extinguisher," says Norihisa Okada, head of all six VFCs in Koishikawa. Okada, who's a florist during the day, joined the VFC in 1957.

### All about NVGs

Local communities are also encouraged to have their own volunteer disaster-preparedness bodies, called Neighborhood Volunteer Groups. In Japan, any small community within a neighborhood traditionally has its own representative group that's formed by residents, who pay about \$8 to join.

When, in the '80s, the Japanese government encouraged the formation of local volunteer groups exclusively dedicated to disaster preparedness, most existing groups of residents took on that responsibility in addition to their regular activities. One reason was that there often aren't enough enthusiastic residents to fill two separate groups in the same community, so it would have ended up being mostly the same people in both groups anyway.

An NVG typically covers a much smaller area than a VFC, sometimes less than a sixth of a square mile. NVGs are self-funded through membership fees and rarely receive public funds. They host a variety of events relating to disaster preparedness and sometimes invite VFCs and local fire departments to their drills so members can get proper training.

It's said that it can be difficult to create such groups among residents of condos, because they have a weaker sense of community compared to those who live in traditional neighborhoods. Despite this, residents of the Nagisa housing complex near Tokyo Disneyland succeeded in running an active NVG and received an award from the Japanese government.

A year after the great earthquake in Kobe, the group was created to improve disaster preparedness at this gigantic housing complex, which has more than 1,300 units.

"The key to success is to provide entertaining drills and events that make people want to participate," says Hidemitsu Takahara, 58, who represents the group. Each year in Septem-

## Each September, the Japanese prepare for the worst

Every year on Sept. 1, the nation's disaster-preparedness day, local governments across Japan hold large-scale drills. About 18.5 million people participated in the latest annual drills, which the Self Defense Forces also joined. The event commemorates the massive magnitude 8 earthquake that devastated Tokyo on Sept. 1, 1923, killing nearly 100,000 people.

During the week following Sept. 1, schools and local communities also hold their own events to raise awareness of disaster preparedness. Some retail stores bundle items such as dust masks, flashlights and hardtack biscuits as a "disaster-preparedness kit."

Drills became more diverse after 1995 when two disastrous incidents, the Kobe earthquake and the sarin attack on Tokyo's subway system, paralyzed the infrastructure of big cities.

In a drill at Nagoya, a city about 200

miles west of Tokyo, subways were stopped for a minute at the nearest stations. Another part of the drill was to simulate the rescue of those who were adrift on the sea following a tsunami. In Chiba, a suburb of Tokyo, a tollway was used to conduct a rescue drill.

Simulating the impact of a large-scale earthquake, the city of Tokyo conducted various drills in conjunction with the National Police Agency, Tokyo Fire Department and Self Defense Forces. The U.S. Air Force's Yokota Air Base was also used as a drill site.

"The more experienced we become, the better we understand about what is still lacking," said Tokyo governor Shintaro Ishihara. "We have to know how to protect ourselves first. Then we can protect our neighbors and communities as well."

About 14,000 people participated in Tokyo's drill. Kikuko Yamanaka, 40,

watched the drill with her 4-year-old daughter and saw people being rescued from a building by helicopter. "It made me think how disastrous it would be should a great earthquake ever hit Tokyo," she said.

Miki Matsuzaki, a 36-year-old housewife, said she couldn't find a disaster-preparedness kit that she buys every year. "I couldn't find it at stores this year. I think the impact of the Kobe earthquake is fading away."

Matsuzaki occasionally talks with her husband, Tomonari, about where they should evacuate in case of a major earthquake. Tomonari, also 36, works in a metropolitan area about 45 minutes from home.

"We want to be prepared so we will be able to protect our son in case of a disaster," the husband said. "We should be able to protect ourselves. We shouldn't leave that responsibility to others."

ber, the group holds a fire drill; this year, they planned to simulate a scenario in which a major earthquake occurs in the middle of night.

In 1996, at the group's first attempt to compile a list of residents, fewer than 70% participated, some claiming that this conflicted with their right to privacy. Last year, however, the group updated the list, and more than 85% of residents registered themselves.

These lists make special note of who has elderly or handicapped people in their family. Those people are often termed "victims of disaster," since, for example, the majority of the

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victims in Kobe were indeed elderly or handicapped.

Only the communities in Kobe that had cultivated strong internal relationships recovered quickly from the earthquake, says Setsuko Chida, 58, one of the condo group's organizers. "We want to unite people in our community so that everybody would remain in the complex to help each other when a great disaster occurs."

### National networking

Another lesson learned from Kobe was that there is a pressing need to create an organization that would build networks among various volunteer groups. "A great number of volunteers flooded into Kobe offering help," says Waseda University's Urano, "but they soon realized that they needed to have a central organization that can consolidate those volunteer efforts so they can act more efficiently."

The Tokyo Volunteer Network for Disaster Relief was established four years ago. "Lessons of the earthquake in Kobe taught us the value of life," says Yasuo Uehara, the organization's founder, who worked in Kobe for 40 days to help those who lost their houses. "The only unbreakable lifeline was friendship. Everything else you need for living, like gas and water, collapsed completely."

The network has now 100 member organizations, including the Red Cross, retail co-ops and labor unions. It provides volunteer leadership training and sends volunteers to disaster-stricken areas. Its operations are supported by funds collected through membership fees.

"When large entities are connected to collaborate under the same goal, the outcome should be great," Uehara says.

The organization's 136 volunteers went to Miyake island in the summer of 2000 to assist elderly people in the aftermath of a volcanic eruption. All of the island's residents were eventually evacuated.

Experts say one of the next challenges in community-based disaster response will be to strengthen ties with businesses. "We have to incorporate local businesses, especially large corporations that boast both human and material resources, into community response programs," says Shinji Hosotsubo, head of the Crisis Management and Preparedness

Organization. He contends that businesses are key forces in beefing up disaster preparedness, but are reluctant to increase their commitment because they don't usually get any credit.

"We need to create a system that will encourage businesses to be a part of their local disaster-preparedness schemes and recognize their efforts as well," Hosotsubo says. "The city of New York couldn't have recovered if it were not for the dedication of local businesses."

And although there were always people in our society who dedicated themselves to helping their communities, engaging in volunteer activities is still a new thing among most Japanese people.

Moreover, until quite recently, volunteer work was perceived as something "noble" that only the wealthier people who have the luxuries of time and money do. And generally speaking, Japanese working people have simply been too busy to be involved in any activities besides job-related work.

Nonetheless, especially since the Kobe quake, people have come to realize that links among various forms of volunteers are indispensable in reinforcing their ability to protect themselves from a disaster.

Some progress is being made, concludes Urano. "After the Kobe earthquake, people are definitely trying to work out a better plan and reach out more." **HPP**

*A Tokyo-based freelance journalist, Makiko Haraga is a graduate of Keio University and of Northwestern University's Medill School of Journalism.*